

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
28 April 2005 (28.04.2005)

PCT

(10) International Publication Number  
**WO 2005/037222 A3**

- (51) International Patent Classification<sup>7</sup>: **A61K 39/04**, 39/02, 39/00, 39/38, C12N 15/00
- (21) International Application Number:  
PCT/US2004/034206
- (22) International Filing Date: 15 October 2004 (15.10.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/512,565 16 October 2003 (16.10.2003) US
- (71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 5th Floor, Oakland, CA 94607-5200 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HORWITZ, Marcus, A.** [US/US]; 1275 Stradella Road, Los Angeles, CA 90077 (US). **HARTH, Gunter** [US/US]; 1525 Sawtelle Blvd. #16, Los Angeles, CA 90025 (US). **TULLIUS, Michael, V.** [US/US]; 5229 Balboa Blvd. #13, Encino, CA 91316 (US).
- (74) Agents: **CULLMAN, Louis, C.** et al.; Preston Gates & Ellis, LLP, 1900 Main Street, Suite 600, Irvine, CA 92614-7319 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report:  
9 September 2005
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RECOMBINANT INTRACELLULAR PATHOGEN IMMUNOGENIC COMPOSITIONS AND METHODS FOR USE

(57) Abstract: Immunogenic compositions comprising recombinant attenuated intracellular pathogens that have been transformed to express recombinant immunogenic antigens of the same or other intracellular pathogens are provided. Exemplary immunogenic compositions include, but are not limited to attenuated recombinant Mycobacteria expressing the major extracellular non-fusion proteins of Mycobacteria and/or other intracellular pathogens. Other embodiments are provided wherein the recombinant attenuated intracellular pathogen is auxotrophic.



WO 2005/037222 A3